

Mariposa County MSW Composting Facility Project

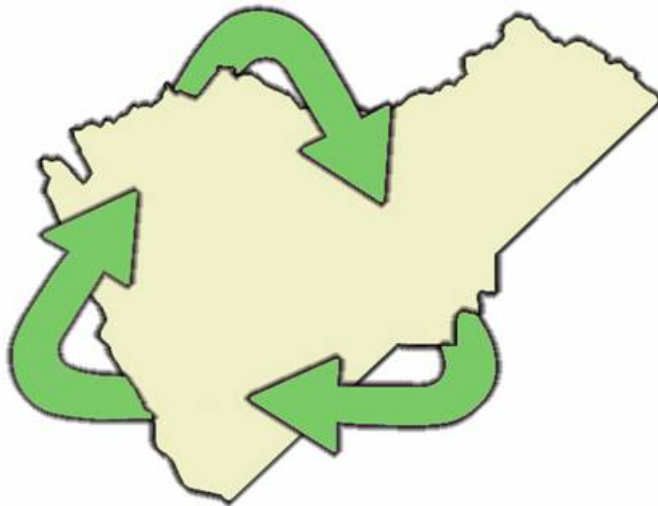


A Joint Presentation By
The Mariposa County Health Department
LEA
&

The Mariposa County Public Works
Solid Waste & Recycling Division

General Overview

- Mariposa County General Background
- Solid Waste & Recycling System Background
- MSW Compost Facility Project



Mariposa Background



- Approximately 931,200 acres about half publicly owned by NPS, USFS and BLM
 - ◆ Home of Yosemite - Over 3 million visitors to Yosemite annually
- Demographics
 - ◆ Population- 2003 17, 803
 - ◆ April 2000- July 2003, 3.9 % increase (State 4.8%)
 - ◆ Percent Change 1990-2000 19.8% (State 13.6 %)

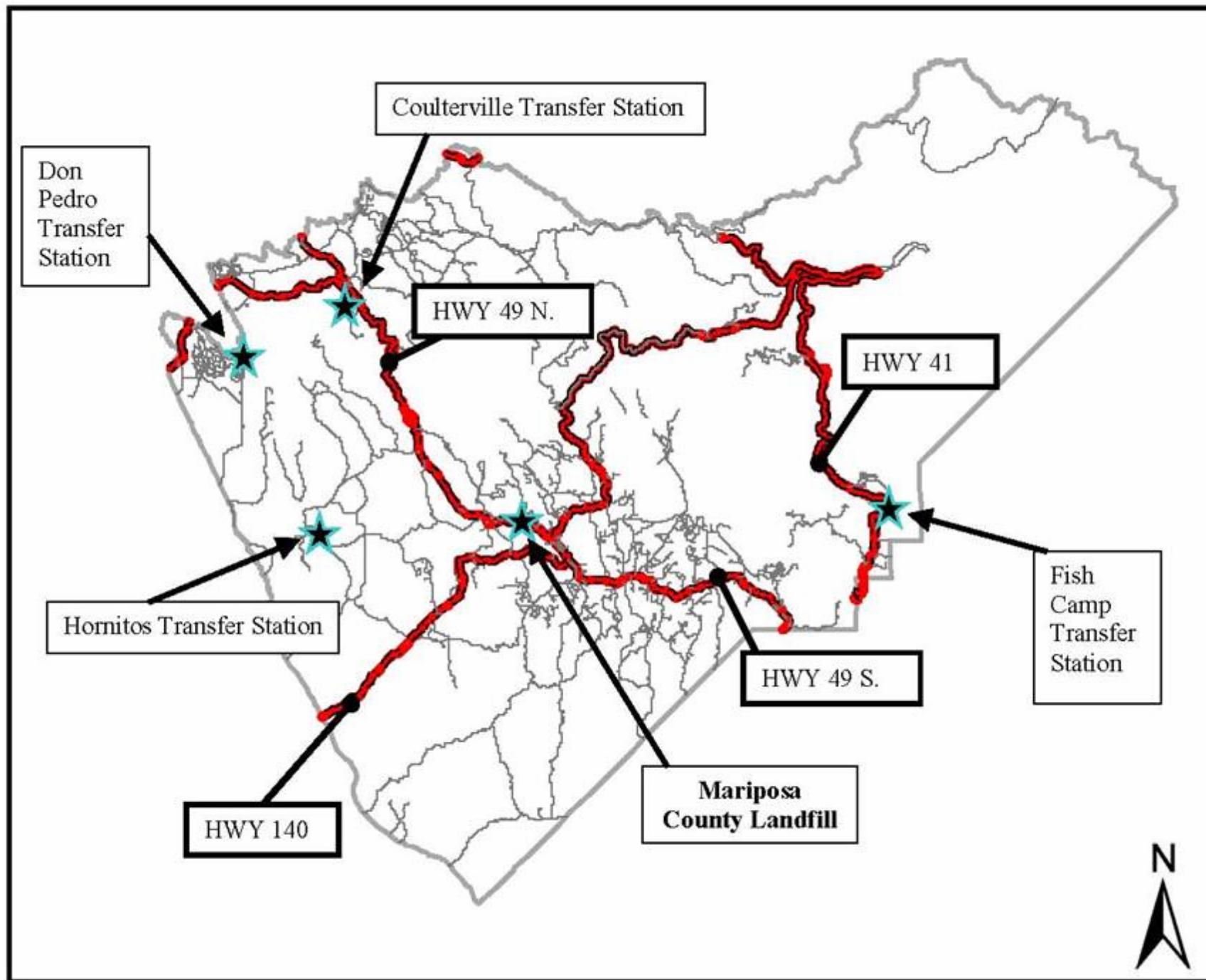
Waste System Background

■ Facilities

- ◆ 1 Landfill- Currently operated by Mariposa County
- ◆ 4 Transfer Stations

■ Haulers

- ◆ NPS
- ◆ Total Waste Systems
- ◆ Fiske Disposal



Landfill

- Parcel 59 acres, 26 acres permitted Class III with maximum potential disposal acreage at 40
- Estimated lifespan of permitted modules 7-10 years (20-30 with MSW Compost Facility)
- Currently Operated by Mariposa County
- Home of the MSW Compost Facility
- SPCA leases 3 acres

Landfill

- Permitted for 100 TPD
- Annual disposal average 12,500 tons per year
- NPS materials- over one third of the material
- No Permanent HHW Facility

Mariposa County Landfill



Diversion

- Currently working under an ADR with a 34% goal- 39% realized working on 2nd ADR
 - ◆ NPS Recycling
 - ◆ DNC Recycling
 - ◆ Landfill Buy Back
 - ◆ Transfer Station Recycling

- Landfill & Transfer Stations
 - ◆ Buy Back Center, Scrap metal, white goods, refrigerators, newsprint, mixed paper, cardboard, CRT's, Tires, batteries and oil are accepted for recycling

 - ◆ MSW Compost Facility includes recycling center upgrades & opportunity for up to 8 pick stations- estimated diversion to be over 50%.

Funding

- Solid Waste & Recycling –Enterprise Fund
 - ◆ 1.2 million annual budget
- ESJPA Grant Assistance- SB 332, UOG...
- MSW Compost Facility Grants and loans totaling 7.12 million, Project Total 8.3 million
- Tipping fees are: \$70 per ton or 9.57 CY un-compacted and \$19.14 compacted

Planning & Regulatory Environment

- LTF CWIMP 5 Year Review approved summer 2004
- Landfill Permit Review 2005- in progress
- JTD- RDSI & WDR
 - ◆ New WDR as of Spring 2003
- SWPPP- draft update completed 2004
- Permitting the MSW Compost Facility- RCSI draft in progress
- Generating numbers for the MSW Compost Facility & Landfill operational costs for bid process underway to end summer 2005
- Landfill and transfer station facility upgrades for compliance and better systems

MSW COMPOST FACILITY

- General History
- Notable Challenges
 - ◆ Naturally Occurring Asbestos
- Facility Overview
 - ◆ Site Layout
 - ◆ Process
 - ◆ Construction Progress



History

- 1987 Authorization for NPS to provide financial assistance
- Approximately 12 years ago, Mariposa County evaluated alternatives in an Economic Feasibility study
- Alternatives investigated included
 - ◆ continued land filling with new sub D liner
 - ◆ hauling to a regional landfill
 - ◆ hauling to a waste-to energy facility
- 1994 Informal Team developed with County, YNP, CIWMB Staff, LEA and other agencies
- 1998-99 A Waste Characterization was conducted, found approximately 69% compostable materials in the Waste Stream
- Composting of MSW at the Mariposa County Landfill was considered the most economical and environmentally sound method.

History

- R & D included County considerations for appropriate design:
 - ◆ Minimize off-site migration of groundwater
 - ◆ Maximize leachate controls
 - ◆ Assist in AB939 compliance
 - ◆ Reduce importation of soil cover material
 - ◆ Reduce environmental problems like methane generation.
 - ◆ Extend the life of the landfill
 - ◆ EDUCATIONAL OPPORTUNITIES
 - ◆ PERFORMANCE BONDING



History

- Composting was considered the best alternative
- RFQ and subsequently, RFP's were sent and graded by compost team
- The team visited many facilities as part of the process

History -Facilities Visited

- Bedminster in Pinetop, Arizona
- HERHOFF Corp. in Toronto, Canada
- Prairieland Resource Recovery Facility
in Truman, Minnesota
- Wright County MSW Facility, Wright
County Minnesota (Buhler Technology
- ECS/DAC in West Yellowstone, Montana.
(This technology was eventually selected
for Mariposa.)

History

- EIR Completed and Certified June 10, 2003
- RFP- Contracts Awarded to Dick Anderson Construction & Engineered Compost Systems 2003
- FUNDING IN PLACE THROUGH PARTNERSHIP EFFORTS
 - ◆ 3.5 Million in Grants from NPS and USDA
 - ◆ 3.2 In loans from the USDA
 - ◆ 1.3 Million from Mariposa County
- CONSTRUCTION IN PROGRESS
 - ◆ Grading underway
 - ◆ Estimated completion 2005



Notable Challenges

- Public Perception

- ◆ Was the technology appropriate?

- Naturally Occurring Asbestos

- ◆ Mitigation and construction plan requirements

- Site Constraints

- ◆ Construction activities while landfill & recycling center stays in operation

- Finances

- ◆ Multi-Agency Cooperation Critical!

Challenges- Asbestos

- Required Sampling and Laboratory Testing to establish the amounts
- Lab results informed mitigation requirements
- Mitigation included in RFP and Contract for project





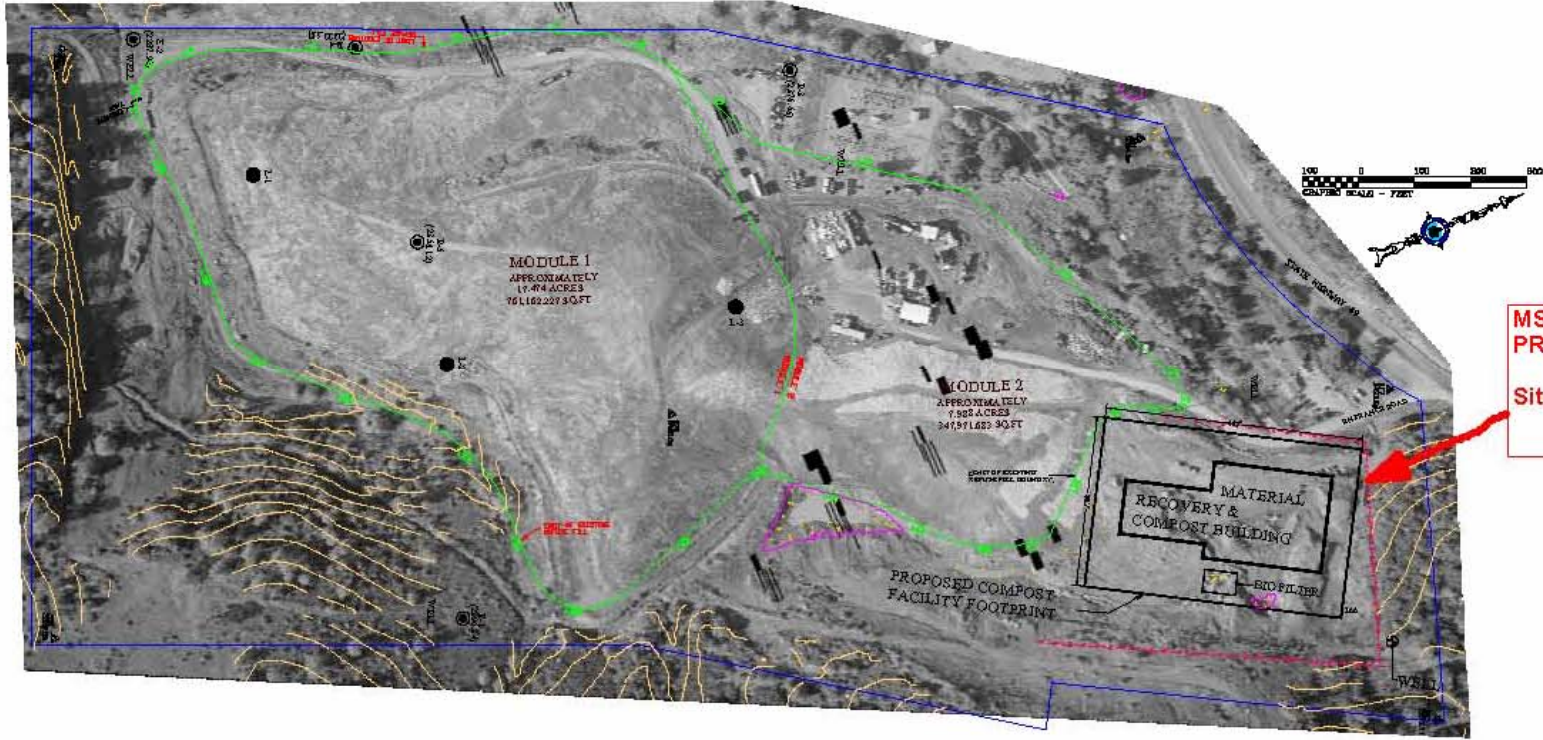


Composting Facility Overview

- Location at existing Landfill Parcel
- Construction site approximately 3.1 acres
- 50,000 Square Foot Facility
- Designed to accept 40 tons of MSW per day with peak of 60 tpd
- Pre Compost Process includes additional recycling opportunities- 8 pick stations, magnet, screens
- Expected to extend landfill life from current permitted modules of 7-10 years to 20-30 years.
- Project includes upgrades to landfill Buy Back Center and Recycling Drop off center
- Project Includes 1200 Square Foot Educational Viewing Room

- NOTES
1. GRADING PLAN REFLECTS PERIOD OF OCT. 1997 TO OCT. 2002
 2. REFER TO LANDFILL MASTER PLAN DATED 4.11.2008 FOR ADDITIONAL INFORMATION ON BUFFERS TO ADJACENT PROPERTY AND LONG TERM OPERATIONS PLANNING
 3. DATA GATHERED FROM AERIAL FLUOR IN DECEMBER 17, 2008

- LEGEND
- LIMITS OF EXISTING REFUSE FILL PER MAP DATE 10/07/98
 - BOUNDARY BETWEEN MODULE 1 & MODULE 2
 - EXISTING CHYRUS LANE (2' INTERVAL) AS OF 10/97
 - LEACHATE MONITORING WELL
 - GROUND-WATER MONITORING WELL
 - LANDFILL GAS MONITORING SITE

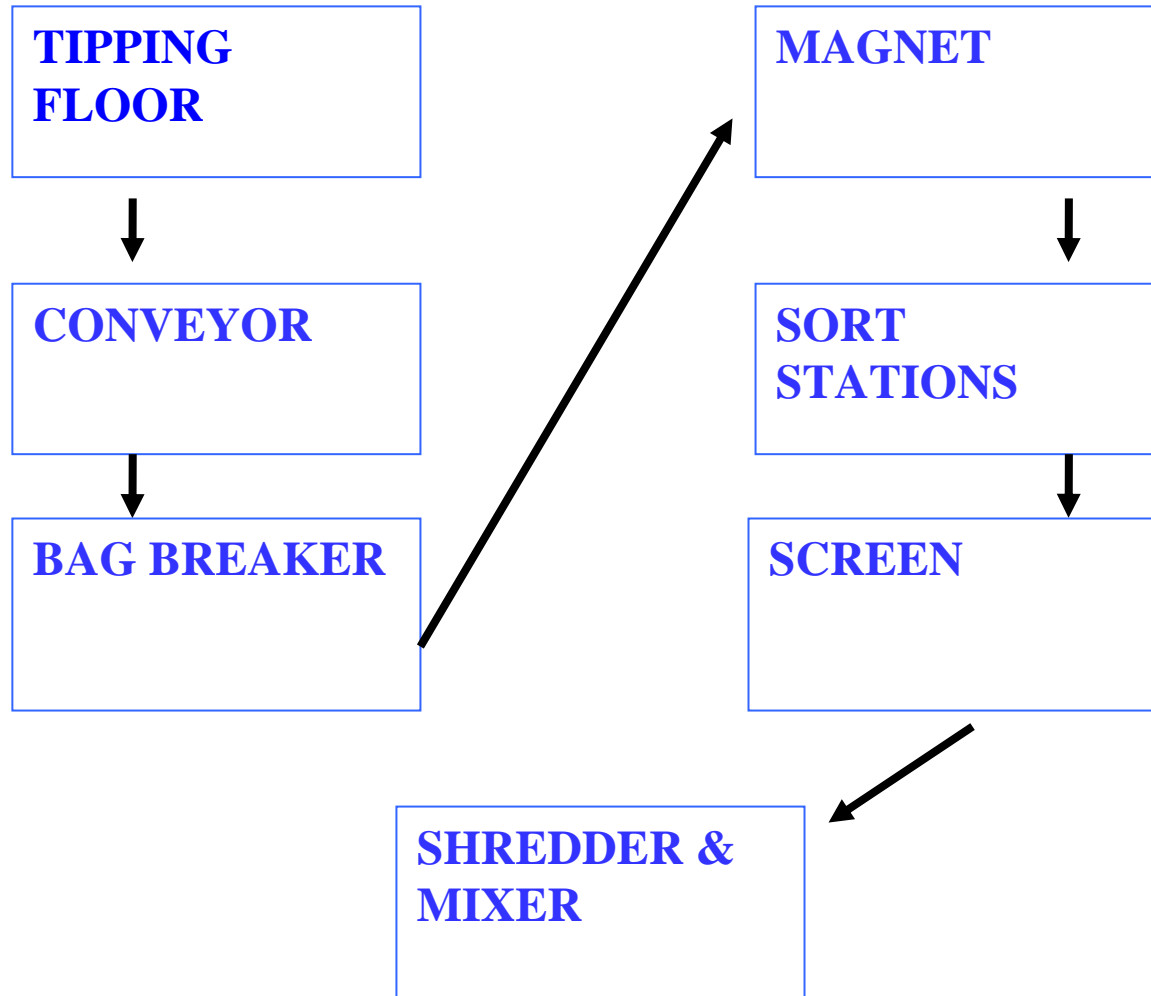


MSW COMPOST PROJECT

Site Location

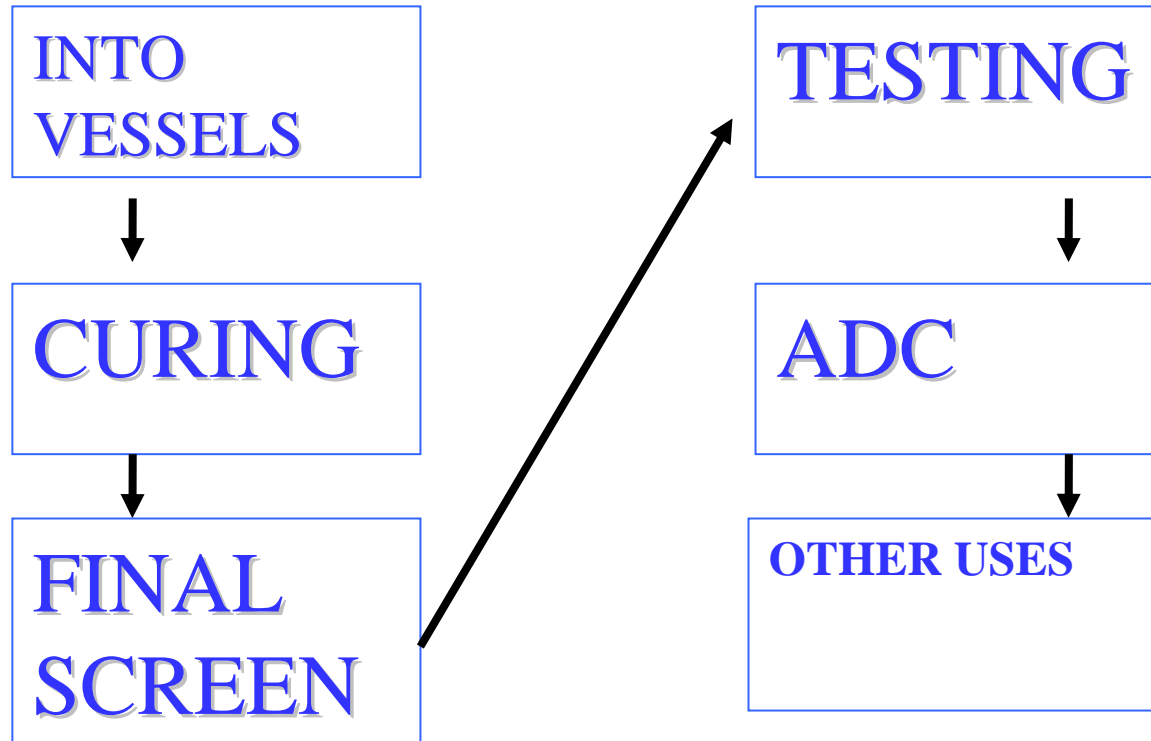


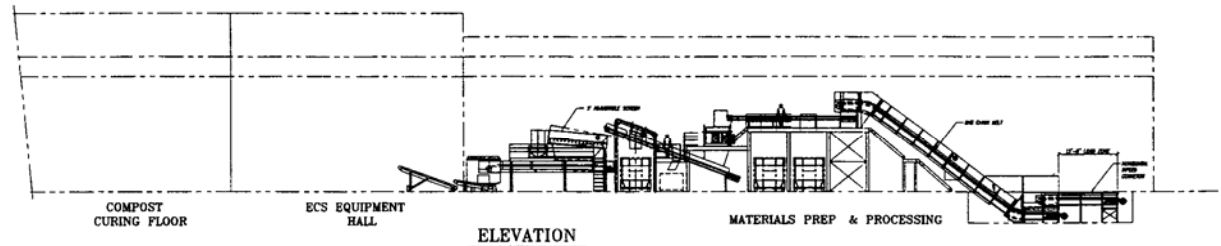
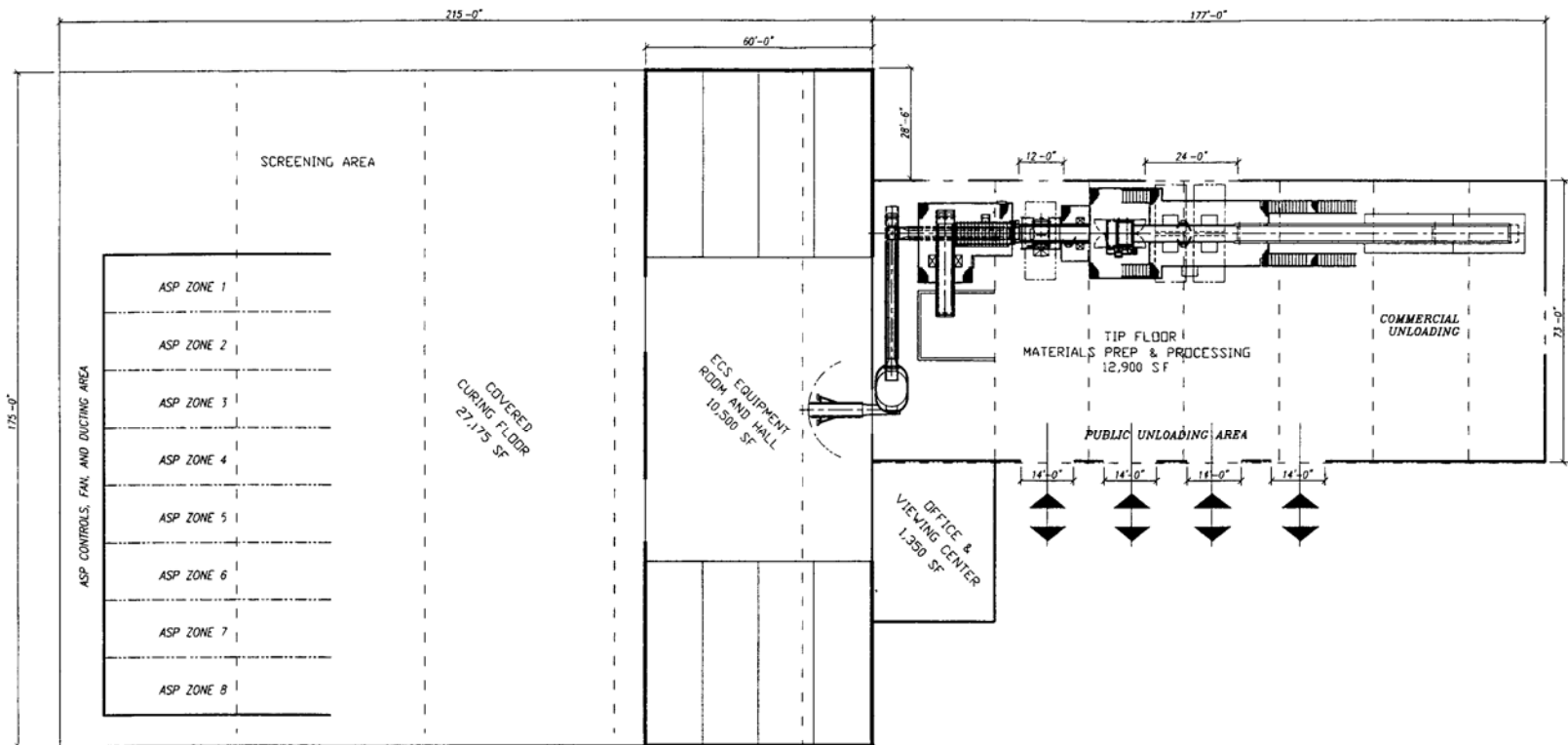
Basic Process



Process Continued

Basic Process Cont.





-	-	-	-
NO	REVISION		

PROPRIETARY INFORMATION
This drawing is the property of ECS and shall not be used, copied or reproduced in whole or in part, nor shall the contents be revealed in any manner to anyone unless written permission is obtained from Engineered Compost Systems, Inc.

TOLERANCES
UNLESS OTHERWISE SPECIFIED

2 PLACE DECIMALS: ±XX
3 PLACE DECIMALS: ±XX
FRACTIONS: ±XX
ANGLES: ±XX

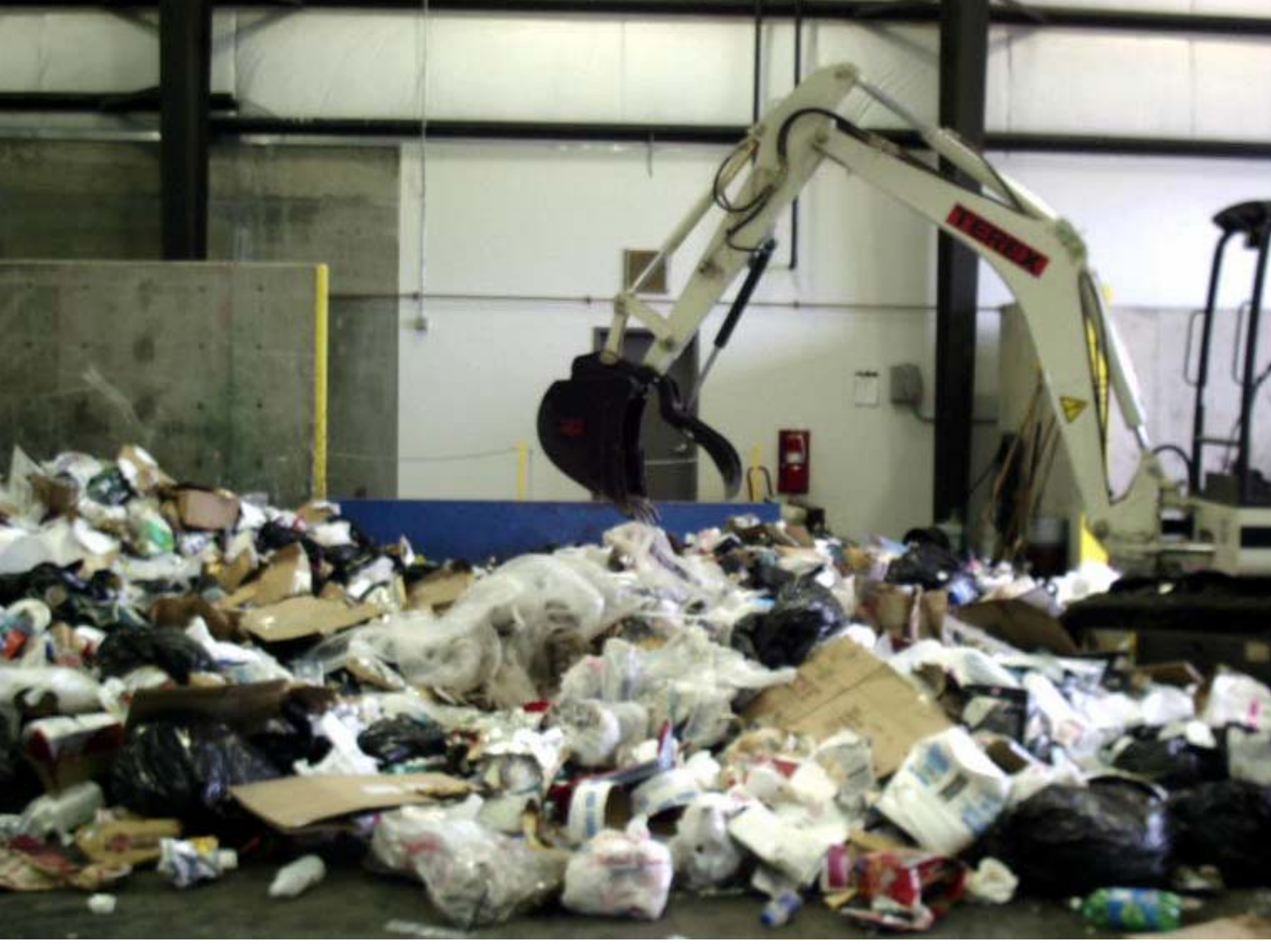
ALL DIMS ARE IN INCHES
DO NOT SCALE DRAWING

THIRD ANGLE PROJECTION

⊙ ≡

ECS ENGINEERED COMPOST SYSTEMS
4211 24th Avenue West Seattle, WA 98148
T 206 634 2621 F 206 634 1309 www.compostsystems.com

DRAWN CJH	SIZE B	TITLE FACILITY LAYOUT Option #1
CHCD	PROJECT	SRT
DATE JUL 15 2003	DWG NO MC-G04	1 OF 1
SCALE N/A	REV -	









Construction Progress

Fall 2003





January 18, 2005





March 2005





April 2005





May 2005









THANK YOU!
QUESTIONS?

Contact Information

Brian Hodge LEA
(209)966-2220

Bhodge@mariposacounty.org

Steve Engfer
MCPW

(209) 966-5356

Sengfer@mariposacounty.org



